

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

REMARKS

Applicants thank the Examiner for discussing this case with their representatives and for providing an unofficial Office Action on May 5, 2003, as a courtesy. That unofficial Action stated that it was an "unofficial copy of an official forthcoming action." Although the Official Office Action indicates that it was mailed on May 6, 2003, the Applicants did not receive that Official Office Action until September 9, 2003, after contacting the Examiner and requesting an Official Office Action. Consequently, this reply is being submitted less than three months from receipt of the Official Office Action. Applicants submit that no extension of time is required. Nonetheless, should the Office find that an extension and fee is required, and in abundance of caution, Applicants petition under 37 C.F.R. §1.136(a) for a three month extension of time and hereby authorize the Commissioner to charge the fee required under 37 C.F.R. §1.17(a) to our Deposit Account No. 50-2613. Applicants respectfully request reconsideration and withdrawal of all outstanding rejections.

Pending Claims

Claims 64-69 have been cancelled without prejudice or disclaimer. Claims 71-81 have been added. Claims 70-81 are pending and under consideration. Claim 70 has been amended to recite more consistent claim language. Support for claims 70-81 can be found throughout the specification, for example, at pages 9-16. Thus, this Amendment is fully supported by the application as filed, and adds no new matter.

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

Rejection Under 35 U.S.C. § 112, second paragraph

The Examiner rejected claims 64 and 65 under 35 U.S.C. § 112, second paragraph as allegedly being "indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." (Office Action, p.2.). Without acquiescing to the Examiner's rejection, Applicants have cancelled claims 64 and 65 without prejudice or disclaimer. Thus, the Examiner's rejection is moot. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph.

Rejection Under 35 U.S.C. § 112, first paragraph

The Examiner rejected claim 64 under 35 U.S.C. § 112, first paragraph, as allegedly not enabled. (Office Action, p. 3). The Examiner asserted that "the specification, while being enabling for R' R" each independently representing hydrogen or lower alkyl, does not reasonably provide enablement for 'but both are not hydrogen.'" *Id.* The Examiner failed to explain how the specification enables one of skill in the art to make and use compounds that comprise either hydrogen or an alkyl at each of R' and R," but does not enable one to make or use such compounds wherein at least one of R' or R" is not a hydrogen – a species within the admittedly enabled genus. Indeed, the specification is replete with examples of such compounds (e.g., page 43, lines

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

26-27, Example 18, "R' = H and R" = CH₃"). Nonetheless, solely to expedite prosecution and without acquiescing to the Examiner's rejection, Claim 64 has been cancelled and none of claims 70-81 recite "but both are not hydrogen." Thus, the rejection is moot. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph for alleged lack of enablement.

The Examiner also rejected claim 64 under 35 U.S.C. § 112, first paragraph, as allegedly "failing to comply with the written description requirement." *Id.* The Examiner asserted that "[t]he requirement that 'R' and R" are not both hydrogen' is considered new matter." *Id.* at pp. 3-4. Solely to expedite prosecution and without acquiescing to the Examiner's rejection, Claim 64 has been cancelled. Moreover, as explained below, claims 70-81 satisfy the written description requirement of 35 U.S.C. § 112, first paragraph.

Where a disclosure recites a species within a genus and that species is later sought to be excluded from the claims, the written description requirement is satisfied. See *In re Johnson*, 194 USPQ 187 (CCPA 1977). In *Johnson*, the Court of Customs and Patent Appeals held:

It is for the inventor to decide what bounds of protection he will seek. In *re Saunders*, 58 CCPA 1316, 1327, 444 F.2d 599, 607, 170 USPQ 213, 220 (1971). To deny appellants...would, as this court said in *Saunders*: 'let form triumph over substance, substantially eliminating the right of an applicant to retreat to an otherwise patentable species merely because he erroneously thought he was first with the genus when he filed.'

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

* * *

The notion that one who fully discloses, and teaches those skilled in the art how to make and use, a genus and numerous species there within, has somehow failed to disclose, and teach those skilled in the art how to make and use, that genus minus two of those species, and has thus failed to satisfy the requirements of §112, first paragraph, appears to result from a hypertechnical application of legalistic prose relating to that provision of the statute.

Id. at 196. See also *In re Driscoll*, 195 U.S.P.Q. 434 (C.C.P.A. 1997) (holding that a claim to a single species was supported by the specification, where the specification recited a Markush group that included the claimed species along with other species not included in the claim).

Thus, Applicants may exclude from the claims a single embodiment disclosed in the specification (i.e., where both R' and R" are hydrogen) and satisfy the written description requirement. Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph.

The Rejection of Claims 64-66 and 70 Under 35 U.S.C. § 103(a)

Claims 64-66 and 70 were rejected under 35 U.S.C. § 103(a) as allegedly being "unpatentable over European Patent Application EP 0,260,162." *Id.* at p. 4. Applicants respectfully traverse this rejection. Although claims 64-66 have been cancelled without prejudice or disclaimer, the rejections will be discussed to the extent that they may be applied to added claims. Claim 70 remains pending.

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. See *In re Piasecki*, 223 U.S.P.Q. 785, 787-88 (Fed. Cir. 1984). To establish *prima facie* obviousness under 35 U.S.C. § 103, three requirements must be satisfied. See Manual of Patent Examining Procedure, Original eighth edition, last revised February, 2003 (MPEP) § 2143. First, there "must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one skilled in the art, to modify the reference or to combine reference teachings." *Id.* Second, there must be a "reasonable expectation of success." *Id.* And third, the references "must teach or suggest all of the claim limitations." *Id.* None of those requirements has been satisfied.

In rejecting claim 64, the Examiner stated that the "primary difference between the structural formula of claim 64 and the formula shown in the reference" is the recitation in claim 64 that R' and R" not both be hydrogen. *Id.* at p 5. The Examiner failed to identify a motivation or suggestion either in EP 0,260,162 or in the knowledge generally available to one skilled in the art to modify EP 0,260,162 as required to support a rejection under 35 U.S.C. § 103. Further, since there is no motivation or suggestion to modify EP 0,260,162, there cannot be a reasonable likelihood that such modification would be successful. Finally, it is not sufficient that the Examiner merely discuss what he believes to be the "primary difference" between the reference and the claimed invention. Rather, every limitation of the claims must be taught or suggested by the

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

reference. See MPEP §2143. For at least those reasons, the rejection of claim 64 under 35 U.S.C. § 103 is improper and should not be applied to any of claims 70-81.

Similarly, in rejecting claim 65, the Examiner flatly asserted that the R₅ substituent of the claimed compounds "is not deemed to be a critical feature" of the claimed compounds. *Id.* at p 5. Applicants respectfully submit that the patentability of the claimed compounds over the cited reference does not rest on the criticality of the R₅ substituent. Rather, Applicants reiterate that every element of the claims must be taught or suggested by the reference. See MPEP §2143. The Examiner failed to identify each element of claim 65 either in the cited reference or in the knowledge generally available to one skilled in the art. Further, the Examiner failed to identify any suggestion or motivation to modify EP 0,260,162. Finally, the Examiner failed even to assert a reasonable expectation of success. Accordingly, Applicants respectfully request reconsideration of this rejection and respectfully submit that this rejection should not be applied to any of claims 70-81.

Finally, the Examiner improperly rejected claims 66 and 70 under 35 U.S.C. § 103 without discussion. Applicants respectfully request that the rejection of claim 70 under 35 U.S.C. § 103 be withdrawn or that the Examiner provide an explanation of the rejection. Applicants respectfully request that the rejection of claim 66 under 35 U.S.C. § 103 not be applied to any of claims 70-81.

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

The Examiner failed to establish any of the requirements necessary to support any of the rejections under 35 U.S.C. § 103. The Examiner did not show a suggestion or motivation in EP 0,260,162 or in the knowledge generally available to one skilled in the art to modify EP 0,260,162. The Examiner did not even address the requirement of a reasonable likelihood of success. Finally, EP 0,260,162 lacks certain elements recited in the claims, which the Examiner either dismissed as "not critical" or failed to address at all. For at least those reasons, each of the rejections under 35 U.S.C. § 103 is improper. Applicants respectfully request reconsideration and request that these rejections under 35 U.S.C. § 103 not be applied to any of claims 70-81.

CONCLUSION

Applicants respectfully assert that the application is in condition for allowance. Applicants respectfully request that the Examiner declare an interference between this application and U.S. Patent Nos. 5,466,861 and 5,837,725, as originally requested in the Communication Pursuant to 37 C.F.R. § 1.607 Request to Declare Interference with Patent Nos. 5,466,861 and 5,837,725 and Notice of Proposed Counts, filed August 10, 1999 (original Communication) and reiterated in the Second Request for Interference and Proposed Counts, included herewith. Applicants have cancelled claims 64-69 without prejudice. Amended claim 70 and new claims 71-81 merely more clearly describe the claimed invention and recite more conventional claim language. Accordingly, for the reasons discussed in the original Communication, 35 U.S.C § 135(b) is satisfied and an interference should be declared. See original Communication at page 21.

Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)


If the Examiner does not consider the application to be in condition for allowance,
Applicants request that the Examiner call the undersigned (858) 720-2500 to arrange an
interview prior to taking action.

Please grant any extensions of time required to enter this response and charge any
additional required fees to our Deposit Account No. 50-2613.

Respectfully submitted,

Dated: November 6, 2003

By:


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RHP:jc

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Patent
45026.00065.CIP6
(formerly 015110.0065.CIP6)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

BOEHM, et al.

Serial No.: 08/141,496

Filed: October 22, 1993

For: COMPOUNDS HAVING SELECTIVE
ACTIVITY FOR RETINOID X RECEPTORS
AND MEANS FOR MODULATION OF
PROCESSES MEDIATED BY RETINOID X
RECEPTORS

Group Art Unit: 1621

Examiner: Killos, Paul J.

SECOND REQUEST FOR INTERFERENCE AND
PROPOSED COUNTS

Honorable Commissioner for Patents and Trademarks
Washington, D.C. 20231

Sir:

Applicants respectfully request that an interference be declared between U.S. Application Serial No. 08/141,496 ("the '496 Application"), filed October 22, 1993, and two U.S. Patents, both to Dawson, et al: U.S. Patent No. 5,466,861 ("the '861 Patent") issued November 14, 1995 and U.S. Patent No. 5,837,725 ("the '725 Patent") issued November 17, 1998.

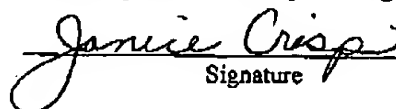
Applicants present four proposed counts.

Certificate of Transmission under 37 CFR 1.8

I hereby certify that this correspondence is being facsimile transmitted (703-872-9306) to the United States Patent and Trademark Office on November 6, 2003.

JANICE CRISP

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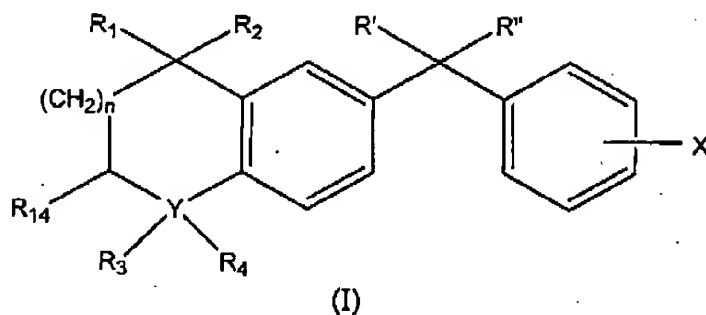


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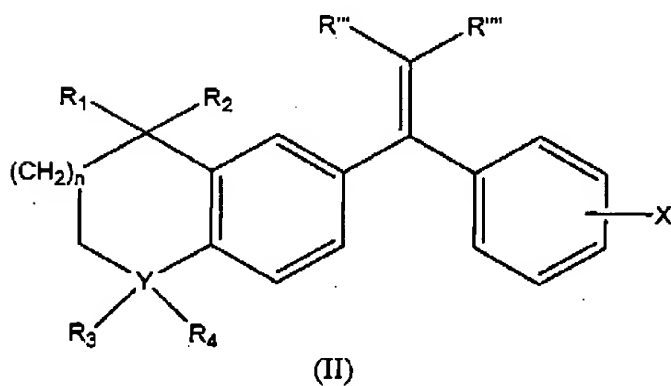
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Patent No.
203/268**Proposed Count 1**

A compound represented by the formula:



or



wherein;

 R_1 is hydrogen or a lower alkyl comprising 1-4 carbon atoms; R_2 is hydrogen or a lower alkyl comprising 1-4 carbon atoms; Y is C, N, S, or O, wherein,

Patent No.
203/268

if Y is C, then R₃ is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R₄ is hydrogen or a lower alkyl comprising 1-4 carbon atoms,

if Y is N, then R₃ is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R₄ does not exist,

if Y is S, then R₃ does not exist, and R₄ does not exist,

if Y is O, then R₃ does not exist, and R₄ does not exist,

R₁₄ is hydrogen or a lower alkyl comprising 1-4 carbon atoms;

R' is hydrogen or a lower alkyl comprising 1-4 carbon atoms and R'' is a lower alkyl comprising 1-4 carbon atoms, or R' and R'' together form a cycloalkyl group;

R''' is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R'''' is a lower alkyl comprising 1-4 carbon atoms, or R''' and R'''' together form a cycloalkyl comprising 3-10 carbon atoms, wherein the cyclopropyl and cycloalkyl groups optionally substituted with a lower alkyl comprising 1-4 carbon atoms;

X is COOH and originates from C3, C4, or C5 of the ring; and

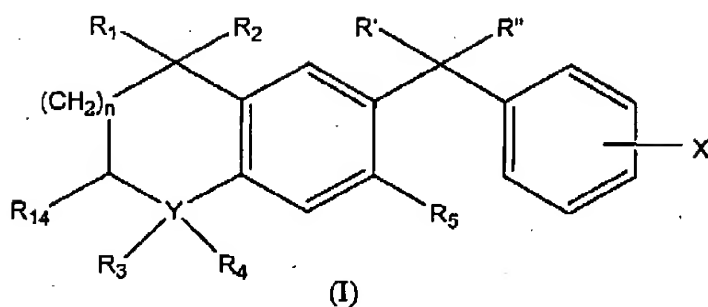
n = 0-1; or

a pharmaceutically acceptable ester, amide or salt thereof.

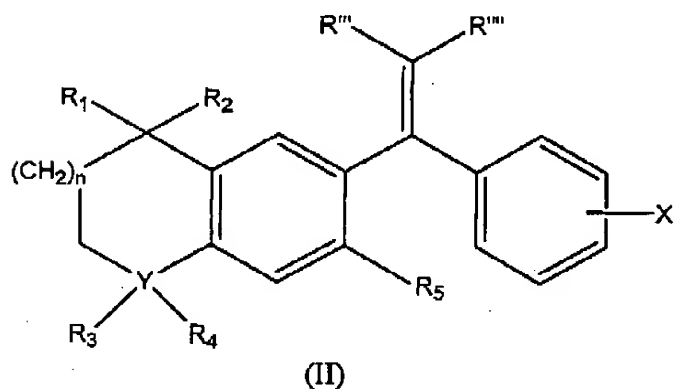
Proposed Count 2

A compound represented by the formula:

Patent No.
203/268



or



wherein;

R_1 is hydrogen or a lower alkyl comprising 1-4 carbon atoms;

R_2 is hydrogen or a lower alkyl comprising 1-4 carbon atoms;

Y is C, N, S, or O, wherein,

if Y is C, then R_3 is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R_4 is hydrogen or a lower alkyl comprising 1-4 carbon atoms,

Patent No.
203/268

if Y is N, then R₃ is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R₄ does not exist,

if Y is S, then R₃ does not exist, and R₄ does not exist,

if Y is O, then R₃ does not exist, and R₄ does not exist;

R₅ is an alkyl comprising 1-4 carbon atoms, or R₅ is OR₇, wherein R₇ is hydrogen or a lower alkyl comprising 1-6 carbon atoms;

R₁₄ is hydrogen or a lower alkyl comprising 1-4 carbon atoms;

R' is hydrogen and R'' is hydrogen, or R' and R'' together form an oxo (keto), or a methano;

R''' is hydrogen;

R'''' is hydrogen;

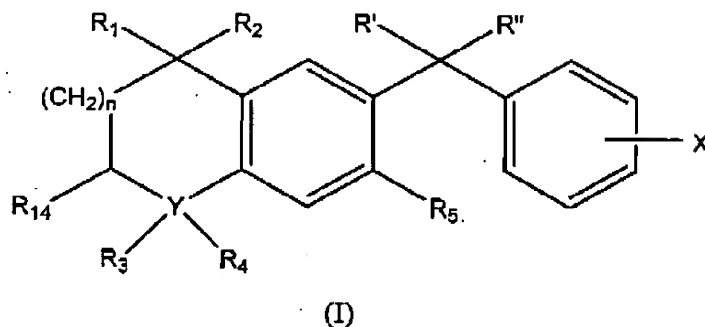
X is COOH and originates from C3, C4, or C5 of the ring; and

n = 0-1; or

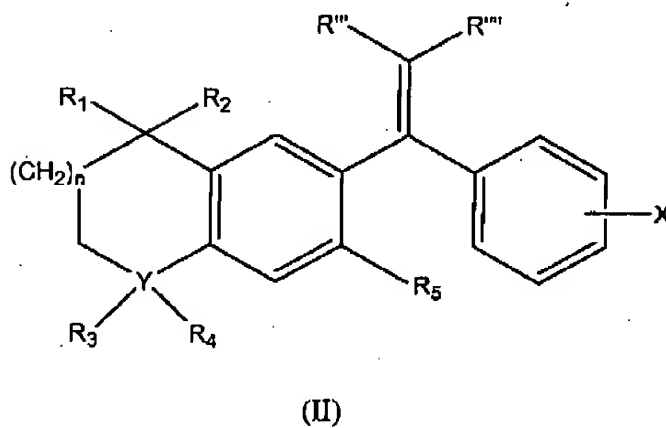
a pharmaceutically acceptable ester, amide or salt thereof.

Patent No.
203/268**Proposed Count 3**

A compound represented by the formula:



or



wherein;

 R_1 is hydrogen or a lower alkyl comprising 1-4 carbon atoms; R_2 is hydrogen or a lower alkyl comprising 1-4 carbon atoms;

Patent No.
203/268

Y is C, N, S, or O, wherein,

if Y is C, then R₃ is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R₄ is hydrogen or a lower alkyl comprising 1-4 carbon atoms,

if Y is N, then R₃ is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R₄ does not exist,

if Y is S, then R₃ does not exist, and R₄ does not exist,

if Y is O, then R₃ does not exist, and R₄ does not exist,

R₅ is an alkyl comprising 1-4 carbon atoms, or R₅ is OR₇, wherein R₇ is hydrogen or a lower alkyl comprising 1-6 carbon atoms;

R₁₄ is hydrogen or a lower alkyl comprising 1-4 carbon atoms;

R' is hydrogen or a lower alkyl comprising 1-4 carbon atoms and R'' is a lower alkyl comprising 1-4 carbon atoms, or R' and R'' together form a cyclopropyl group;

R''' is hydrogen or a lower alkyl comprising 1-4 carbon atoms, and R'''' is a lower alkyl comprising 1-4 carbon atoms, or R''' and R'''' together form a cycloalkyl comprising 3-10 carbon atoms, wherein the cyclopropyl and cycloalkyl groups are optionally substituted with a lower alkyl comprising 1-4 carbon atoms;

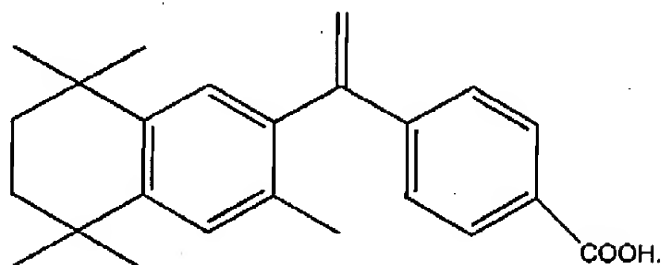
X is COOH and originates from C3, C4, or C5 of the ring; and

n = 0-1; or

a pharmaceutically acceptable ester, amide or salt thereof.

Patent No.
203/268**Proposed Count 4**

A compound represented by the formula:

**REMARKS**

Applicants originally requested a Declaration of Interference between the '496 application and the '861 and '725 patents on August 10, 1999. In response to an Office Action dated May 6, 2003, Applicants have amended the claims of the '496 Application (Amendment and Response, submitted herewith). Applicants submit new proposed counts to reflect the changes to the pending claims of the '496 Application.

Claims Corresponding to the Counts

The '861 Patent claims corresponding to proposed count 1 include at least claims 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, and 23. The '725 Patent claims corresponding to proposed count 1 include at least claims 1, 2, 3, 4, 5, 7, 10, 11, 12, 13, 14, 15, 26, 27, 28, and 29. The '496 Application claims corresponding to proposed count 1 are claims 71, 72, 73, and 79.

The '861 Patent claims corresponding to proposed count 2 include at least claims 1, 2, 3, 4, 6, 7, 12, 15, and 23. The '725 Patent claims corresponding to proposed count 2 include at least claims 1, 2, 3, 5, 7, 10, 11, 13, 14, 26, 27, 28, and 29. The '496 Application claims corresponding to proposed count 2 are claims 74 and 80.

Patent No.
203/268

The '861 Patent claims corresponding to proposed count 3 include at least claims 1, 2, 3, 4, 5, 6, 7, 8, 15, and 23. The '725 Patent claims corresponding to proposed count 3 include at least claims 1, 2, 3, 5, 7, 10, 11, 12, 13, 14, 15, 26, 27, 28, and 29. The '496 Application claims corresponding to proposed count 3 are claims 75, 76, 77, and 81.

Claim 13 in the '861 Patent corresponds to proposed count 4. Claims 70 and 78 in the '496 Application corresponds to proposed count 4. No claims in the '725 Patent correspond to proposed count 4.

Explanation of why each claim corresponds to proposed count.

Proposed count 1.

Proposed count 1 includes compounds with the structural formula of proposed count 1, having no substituent at position R_5 (i.e., R_5 is H).

'861 Patent

Claim 1 of the '861 Patent recites compounds within the scope of proposed count 1. Claim 1, therefore, corresponds to proposed count 1.

Claim 2 of the '861 Patent is directed to pharmaceutical compositions that comprise a compound of claim 1, and therefore corresponds to proposed count 1.

Claim 3 of the '861 Patent depends from claim 1, and narrows the class of compounds to those having R_1 ortho to R_2 , and R_1 and R_2 linked together to form a 5- or 6-membered cycloalkylene ring. Claim 3 includes compounds within the scope of proposed count 1.

Claim 4 of the '861 Patent depends from claim 3 and further narrows the class of compounds having R_1 ortho to R_2 , and R_1 and R_2 linked together to form a 6-membered cycloalkylene ring. Claim 4 includes compounds within the scope of proposed count 1.

Claims 5, 6, 7, 8, 10, 11, 14, and 16 depend from claim 4 and further narrow the scope of claimed compounds. Each of claims 5, 6, 7, 8, 10, 11, 14, and 16 includes compounds within the scope of proposed count 1.

Claim 15 defines a pharmaceutical composition including a compound within the scope of claim 4. Since claim 4 includes compounds within the scope of proposed count 1, claim 15 also corresponds to count 1.

Patent No.
203/268

Claims 16 - 22 exclude compounds having a substituent at R_5 (i.e. $n = 0$). Such compounds fall within the scope of proposed count 1.

Claim 23 of the '861 Patent is directed to pharmaceutical compositions comprising certain compounds, including the compounds of claim 1. Claim 23 is identical to claim 1 except that claim 23 is directed to a pharmaceutical composition and that claim 23 lacks certain limitations recited in subsection (d) of claim 1. Thus, the compositions of claim 23 include compounds within the class defined in claim 1. The pharmaceutical compositions defined by claim 23 include compounds within the scope of proposed count 1, therefore claim 23 corresponds to proposed count 1.

'725 Patent

Claim 1 of the '725 Patent recites compounds within the scope of proposed count 1. Claim 1, therefore, corresponds to count 1.

Claim 2 of the '725 Patent depends from claim 1 and narrows the class of compounds to those wherein R_1 is ortho to R_2 , and R_1 and R_2 are linked together to form a 5- or 6-membered cycloalkylene ring. Claim 2 includes compounds within the scope of proposed count 1.

Claim 3 of the '725 Patent depends from claim 2 and is limited to compounds wherein R_1 is ortho to R_2 and R_1 , and R_2 are linked together to form a 6-membered cycloalkylene ring. Claim 3 includes compounds within the scope of proposed count 1.

Claim 4 is directed to compounds of claim 3 having no substituent at R_5 . Such compounds fall within the scope of proposed count 1.

Claim 5 narrows the compounds of claim 3 to those that have an R_4 consisting of one of two aromatic carboxylic acids: a pyridine carboxylic acid or benzoic acid. The compounds of proposed count 1 may have a benzoic acid at that position. Thus, claim 5 includes compounds within the scope of proposed count 1.

Claims 10 and 13 narrow the compounds of claim 3 to specific R_3 substituents. These claims include compounds that fall within the scope of proposed count 1.

Claim 7 narrows the compounds of claim 5 to those where R_4 is benzoic acid. Compounds of proposed count 1 may have a benzoic acid at this position.

Patent No.
203/268

Claims 11 and 14 further narrow the class of compounds of claim 5 to specific R_3 substituents. These claims included compounds that fall within the scope of proposed count 1.

Claims 12 and 15 depend from claims 11 and 14, respectively, and further narrow the R_3 substituent. These claims included compounds that fall within the scope of proposed count 1.

Claims 26 and 27 are directed, *inter alia*, to pharmaceutical compositions including a compound within the class of compounds defined by claims 1 and 3, respectively. The pharmaceutical compositions of claims 26 and 27 include compounds that fall within the scope of proposed count 1 and therefore correspond thereto.

Claims 28 and 29, are directed, *inter alia*, to methods of treating an individual afflicted with the recited conditions by administering to the individual a therapeutically effective amount of the compound of claims 1 and 3, respectively, or a pharmaceutical composition thereof. The methods of claims 28 and 29 include administering a compound within the scope of proposed count 1 and therefore correspond thereto.

'496 Application

Claim 71 of the '496 Application corresponds identically to proposed count 1. Claims 72 and 73 depend from claim 71 and recite certain compounds within the scope of independent claim 71. Claim 79 recites a pharmaceutical composition comprising a compound of claim 71 (i.e., a compound of proposed count 1).

Proposed count 2.

Proposed count 2 includes compounds having the structural formula of proposed count 2, which includes compounds having a substituent at position R_5 (i.e., R_5 need not be H).

'861 Patent

Claim 1 of the '861 Patent recites compounds within the scope of proposed count 2. Claim 1, therefore, corresponds to proposed count 2.

Claim 2 of the '861 Patent is directed to pharmaceutical compositions that comprise a compound of claim 1, and therefore corresponds to proposed count 2.

Patent No.
203/268

Claim 3 of the '861 Patent depends from claim 1, and narrows the class of compounds to those having R_1 ortho to R_2 , and R_1 and R_2 linked together to form a 5- or 6-membered cycloalkylene ring. Claim 3 includes compounds within the scope of proposed count 2.

Claim 4 of the '861 Patent depends from claim 3 and further narrows the class of compounds having R_1 ortho to R_2 , and R_1 and R_2 linked together to form a 6-membered cycloalkylene ring. Claim 4 includes compounds within the scope of proposed count 2.

Claims 6 and 7 depend from claim 4 and further narrow the scope of claimed compounds. Each of claims 6 and 7 includes compounds within the scope of proposed count 2.

Claim 12 is directed to a species within the scope of proposed count 2.

Claim 15 defines a pharmaceutical composition including a compound within the scope of claim 4. Since claim 4 includes compounds within the scope of proposed count 2, claim 15 also corresponds to count 2.

Claim 23 of the '861 Patent is directed to pharmaceutical compositions comprising certain compounds, including the compounds of claim 1. Thus, the compositions of claim 23 include compounds within the class defined in claim 1. The pharmaceutical compositions defined by claim 23 include compounds within the scope of proposed count 2, therefore claim 23 corresponds to proposed count 2.

'725 Patent

Claim 1 of the '725 Patent recites compounds within the scope of proposed count 2. Claim 1, therefore, corresponds to count 2.

Claim 2 of the '725 Patent depends from claim 1 and narrows the class of compounds to those wherein R_1 is ortho to R_2 , and R_1 and R_2 are linked together to form a 5- or 6-membered cycloalkylene ring. Claim 2 includes compounds within the scope of proposed count 2.

Claim 3 of the '725 Patent depends from claim 2 and is limited to compounds wherein R_1 is ortho to R_2 and R_1 , and R_2 are linked together to form a 6-membered cycloalkylene ring. Claim 3 includes compounds within the scope of proposed count 2.

Patent No.
203/268

Claim 5 narrows the compounds of claim 3 to those that have an R_4 consisting of one of two aromatic carboxylic acids: a pyridine carboxylic acid or benzoic acid. The compounds of proposed count 2 may have a benzoic acid at that position. Thus, claim 5 includes compounds within the scope of proposed count 2.

Claims 10 and 13 narrow the compounds of claim 3 to specific R_3 substituents. These claims include compounds that fall within the scope of proposed count 2.

Claim 7 narrows the compounds of claim 5 to those where R_4 is benzoic acid. Compounds of proposed count 2 may have a benzoic acid at this position.

Claims 11 and 14 further narrow the class of compounds of claim 5 to specific R_3 substituents. These claims included compounds that fall within the scope of proposed count 2.

Claims 26 and 27 are directed, *inter alia*, to pharmaceutical compositions including a compound within the class of compounds defined by claims 1 and 3, respectively. The pharmaceutical compositions of claims 26 and 27 include compounds that fall within the scope of proposed count 2 and therefore correspond thereto.

Claims 28 and 29, are directed, *inter alia*, to methods of treating an individual afflicted with the recited conditions by administering to the individual a therapeutically effective amount of the compound of claims 1 and 3, respectively, or a pharmaceutical composition thereof. The methods of claims 28 and 29 include administering a compound within the scope of proposed count 2 and therefore correspond thereto.

'496 Application

Claim 74 of the '496 Application corresponds identically to proposed count 2. Claim 80 recites a pharmaceutical composition comprising a compound of claim 74 (i.e., a compound of and proposed count 2).

Proposed count 3.

Proposed count 3 includes compounds having the structural formula of proposed count 3.

Patent No.
203/268

'861 Patent

Claim 1 of the '861 Patent recites compounds within the scope of proposed count 3. Claim 1, therefore, corresponds to proposed count 3.

Claim 2 of the '861 Patent is directed to pharmaceutical compositions that comprise a compound of claim 1, and therefore corresponds to proposed count 3.

Claim 3 of the '861 Patent depends from claim 1, and narrows the class of compounds to those having R_1 ortho to R_2 , and R_1 and R_2 linked together to form a 5- or 6-membered cycloalkylene ring. Claim 3 includes compounds within the scope of proposed count 3.

Claim 4 of the '861 Patent depends from claim 3 and further narrows the class of compounds having R_1 ortho to R_2 , and R_1 and R_2 linked together to form a 6-membered cycloalkylene ring. Claim 4 includes compounds within the scope of proposed count 3.

Claims 5, 6, 7, and 8 depend from claim 4 and further narrow the scope of claimed compounds. Each of claims 5, 6, 7, and 8 includes compounds within the scope of proposed count 3.

Claim 15 defines a pharmaceutical composition including a compound within the scope of claim 4. Since claim 4 includes compounds within the scope of proposed count 3, claim 15 also corresponds to count 3.

Claim 23 of the '861 Patent is directed to pharmaceutical compositions comprising certain compounds, including the compounds of claim 1. Thus, the compositions of claim 23 include compounds within the class defined in claim 1. The pharmaceutical compositions defined by claim 23 include compounds within the scope of proposed count 3, therefore claim 23 corresponds to proposed count 3.

'725 Patent

Claim 1 of the '725 Patent recites compounds within the scope of proposed count 3. Claim 1, therefore, corresponds to count 3.

Claim 2 of the '725 Patent depends from claim 1 and narrows the class of compounds to those wherein R_1 is ortho to R_2 , and R_1 and R_2 are linked together to form

Patent No.
203/268

a 5- or 6-membered cycloalkylene ring. Claim 2 includes compounds within the scope of proposed count 3.

Claim 3 of the '725 Patent depends from claim 2 and is limited to compounds wherein R_1 is ortho to R_2 and R_1 , and R_2 are linked together to form a 6-membered cycloalkylene ring. Claim 3 includes compounds within the scope of proposed count 3.

Claim 5 narrows the compounds of claim 3 to those that have an R_4 consisting of one of two aromatic carboxylic acids: a pyridine carboxylic acid or benzoic acid. The compounds of proposed count 1 may have a benzoic acid at that position. Thus, claim 5 includes compounds within the scope of proposed count 3.

Claims 10 and 13 narrows the compounds of claim 3 to specific R_3 substituents. These claims include compounds that fall within the scope of proposed count 3.

Claim 7 narrows the compounds of claim 5 to those where R_4 is benzoic acid. Compounds of proposed count 3 may have a benzoic acid at this position.

Claims 11 and 14 further narrow the class of compounds of claim 5 to specific R_3 substituents. These claims include compounds that fall within the scope of proposed count 3.

Claims 12 and 15 depend from claims 11 and 14, respectively, and further narrow the R_3 substituent. These claims include compounds that fall within the scope of proposed count 3.

Claims 26 and 27 are directed, *inter alia*, to pharmaceutical compositions including a compound within the class of compounds defined by claims 1 and 3, respectively. The pharmaceutical compositions of claims 26 and 27 include compounds that fall within the scope of proposed count 3 and therefore correspond thereto.

Claims 28 and 29, are directed, *inter alia*, to methods of treating an individual afflicted with the recited conditions by administering to the individual a therapeutically effective amount of the compound of claims 1 and 3, respectively, or a pharmaceutical composition thereof. The methods of claims 28 and 29 include administering a compound within the scope of proposed count 3 and therefore correspond thereto.

Patent No.
203/268'496 Application

Claim 75 of the '496 Application corresponds identically to proposed count 3. Claims 76 and 77 depend from claim 75 and recite certain compounds within the scope of independent claim 75. Claim 81 recites a pharmaceutical composition comprising a compound of claim 75 (i.e., a compound of proposed count 3).

Proposed count 4.

Proposed count 4 defines a species within the genus defined by proposed count 2. However, this species is patentably distinct, that is, non-obvious over, the genus defined by proposed count 2, because this species has superior and unexpected properties over the compounds in the genus of proposed count 2. See, e.g., *Hester v. Allgeier*, 215 USPQ 481 (CCPA 1982); MPEP 2309.01 ("a count to a species and a count to a genus might properly both be included in the interference if the species is patentable over the genus, even though the genus might not be patentable, given the species").

The superior and unexpected potency of the compound of count 4 is shown by applicants in tables 2 and 4 of the '496 Application. In these tables the compound of proposed count 4 is identified as 3-methyl-TTNEB. Boehm, et al., Synthesis and structure activity relationships of novel retinoid X receptor-selective retinoids, *J Med Chem* 37(18):2930-41 (1994) (attached hereto) also shows the much superior and unexpected properties of this compound, which in the article is designated 6b. According to the article, this compound is "[t]he most potent compound of the series." Boehm, et al., *J Med Chem* at 2930 (last line of abstract). The compound is in fact several times more potent than other compounds in the series.

'861 Patent

Claim 13 of the '861 Patent corresponds to proposed count 4.

'725 Patent

No claims in the '725 Patent corresponds to proposed count 4.

'496 Application

Claim 70 of the '496 Application corresponds to proposed count 4.

Patent No.
203/268


The requirements of 35 U.S.C. § 135(b) are met for the added claims. The '496 Application was filed October 22, 1993, prior to the issuance of the '861 and '725 Patents. In the '496 Application, at least claims 4, 6, 15 and 16 encompassed the subject matter of claims 70-81, thus satisfying the requirement of 35 U.S.C. § 135(b).

The '496 Application has an earlier effective filing date than the '861 and '725 Patents. Accordingly, the requirements of 37 C.F.R. 1.608(a) and (b) are inapplicable here.

Respectfully submitted,

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